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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,568	05/05/2006	Thomas Hasskerl	287554US0PCT	6924

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EXAMINER	
WALTERS JR, ROBERT S	

ART UNIT	PAPER NUMBER
1792	

NOTIFICATION DATE	DELIVERY MODE
07/16/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/578,568	HASSKERL ET AL	
	Examiner	Art Unit	
	ROBERT S. WALTERS JR	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 June 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27 and 29-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27 and 29-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Application

Claim 28 is cancelled. Claims 1-27 and 29-42 are pending and presented for examination.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/30/2009 has been entered.

Response to Arguments

Applicant's arguments filed 6/30/2009 have been fully considered but they are not persuasive.

The applicant argues that the recitation that the coated inert nanoparticles have a median primary particle size of from 2 to 100 nm is not taught or suggested by the prior art. The examiner disagrees and contends that while Hino fails to disclose this particular range (note Hino teaches particle sizes of from 100 nm to 3000 nm, see 0042) it would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the nanoparticles to have a median particle size in this range (absent evidence to the contrary or a showing of criticality of

this variable), as it would have been obvious to one of ordinary skill in the art at the time of the invention that the size of the nanoparticles would affect the quality of the coating, such as its transparency and scratch resistance. The applicant further contends that Hino fails to disclose that the median particle size is a result effective variable. However, the examiner disagrees with this contention. Hino states that the size of the coated nanoparticles will have an affect on both the viscosity and the transparency (0042). Therefore, Hino makes clear that the particle size of the coated nanoparticles is a result effective variable.

The applicant further argues that the references of record fail to teach or suggest the degree of aggregation. However, the examiner maintains that Hino's metal oxide particles either inherently have a degree of aggregation between 0.01 to 99% (as any amount of aggregation outside of full aggregation will necessarily fall within this range), based on aggregates comprising at least two primary particles, or that it would have been obvious to one of ordinary skill in the art at the time of the invention to adjust the degree of aggregation comprising two primary particles to be in the claimed range, through routine optimization. It would have been obvious to one of ordinary skill in the art at the time of the invention that the degree of aggregation of these primary particles would ultimately affect the antistatic properties of the hard coat as well as the transparency of the hard coat. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to optimize this degree of aggregation to provide metal oxide particles having a degree of aggregation from 0.01 to 99% based on aggregates which comprise at least two primary particles.

Finally, the applicant argues that it was unexpected to get the same conductivity when using nanoparticles and 33% ITO compared to 50% ITO and no nanoparticles. However, the

applicant has not provided evidence to support that this is truly unexpected, to show unexpected results the evidence should establish that the differences are in fact unexpected and unobvious and of both statistical and practical significance. Furthermore, evidence of unexpected results must compare the claimed invention with the closest prior art. Therefore, the applicant's arguments regarding unexpected results is not persuasive.

Applicant's arguments, see request for continued examination, filed 6/30/2009, with respect to claim 27 have been fully considered and are persuasive. The new matter rejection of claim 27 has been withdrawn.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claims 1-27 and 29-42 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-40 of copending Application No. 10/548878 in view of Hino et al. (U.S. PGPUB No. 2003/0173545). Claims 1-40 of Application No. 10/548878 teach all the features of pending claims 1-27 and 29-42 but are silent on the use of coated nanoparticles. Hino teaches the use of coated silica particles in an essentially identical lacquer composition (see 0028-0029 and Figs 1-2). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify copending Application No. 10/548878 to use a coated silica particle according to Hino to arrive at the invention of pending claims 1-27 and 29-42.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 6 and 7 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hino et al. (U.S. PGPUB No. 2003/0173545).

Regarding claims 6 and 7, Hino teaches a fabricated plastics moulding made by a similar process and the use of the moulding for displays (0142). Since in spite of the fact that the claim may recite only process limitations, it is the patentability of the product claimed and not of the recited process steps which must be established. Because of the nature of product-by process claims, the Examiner cannot ordinarily focus on the precise difference between the claimed product and the disclosed product. It is then Applicants' burden to prove that an unobvious difference exists. See ***In re Marosi***, 218 USPQ 289, 292-293 (CAFC 1983), *In re Thorpe*, 227 USPQ 964 (CAFC 1985).

See also footnote 11 O.G. Notice 1162 59-61, wherein a 35 USC 102/103 rejection is authorized in the case of product-by-process claims because the exact identity of the claimed product or the prior art product cannot be determined by the Examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-5, 8-10, 12, 20, 27, 30, 31 and 33-36 rejected under 35 U.S.C. 103(a) as being unpatentable over Hino et al. (U.S. PGPUB No. 2003/0173545).

I. Regarding claims 1 and 4-5, 8-10, 12, 20, 30, 31, 33 and 34, Hino teaches a process for producing mouldings from plastics comprising coating a moulding, wherein the plastics moulding can comprise PC or PET or other plastics (0055) and is transparent (0055), coated on one side with a lacquer system (the antistatic hard coat, see 0056-0057) and curing the lacquer system (0058). Hino further teaches the fabricated plastics moulding made by the process and the use of the moulding for displays (0142). Finally, Hino teaches that the lacquer system comprises:

a) a binder (the polyfunctional acrylate, it should be noted that additional acrylates can be added to this binder which could serve as a thickener as well, see 0032-0035, 0049, and 0052);

b) optionally a solvent (0048);

c) optionally other normal additives (0052);

d) a thickener (it should be noted as above according to the claim interpretation a thickener is also optional, but Hino also teaches that other acrylates, such as urethane acrylates (0034) could be used as well as photo-curing agents and plasticizers, which would be comparable to a thickener (0032-0035, 0049, and 0052);

e) an electrically conductive metal oxide (specifically indium tin oxide) as fine particles with a particle size of from 10-30 nm and from 50 to 400 parts based on the binder (0037-0039); and

f) from 10 to 80 parts by weight based on the binder of coated (see 0028-0029 and Figs 1-2) inert silica particles (0041-0046).

Hino further teaches that inert titanium dioxide nanoparticles can be included in the composition (0037), as well as functional nanoparticles such as zinc oxide (0037).

Hino fails to explicitly teach a percentage of aggregation from 0.01-99% for the metal oxide particles and the silica particles being from 2 to 100 nm. However, it would be obvious to one of ordinary skill in the art at the time of the invention that the oxide particles would inherently have a degree of aggregation from 0.01-99% or in the alternative that the composition could be adjusted by one of ordinary skill in the art at the time of the invention through routine optimization to provide the metal oxide particles with a percentage of aggregation from 0.01-

99%. Regarding the nanoparticles, Hino teaches a silica particle size of preferably from 0.1 to 3 microns (100-3000 nanometers, see 0042). However, it would have been obvious to one of ordinary skill in the art at the time of the invention that a slightly smaller particle size could be used with a reasonable expectation of success and a predictable result. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention to choose the instantly claimed particle size range through process optimization (since the size of the silica particles will necessarily affect the quality of the coating produced from the composition, see Hino at 0042), since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

II. Regarding claims 2 and 3, Hino teaches all the elements required by claim 1, however is silent on the Brookfield viscosity. It would have been obvious to one of ordinary skill in the art at the time of the invention that the viscosity of the components a) to c) could be modulated by the amount of the components, especially the solvent component b) such that it could be adjusted over a broad range of viscosities. Furthermore, the viscosity would affect the coatability of the composition. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to choose the instantly claimed ranges through process optimization, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

III. Regarding claim 27, Hino teaches all the limitations of claim 1, but fails to teach the composition comprising from 0.1 to 50% by weight of inert nanoparticles and from 20-70% by

weight of ITO, based on a dry film. However, it would have been obvious to one of ordinary skill in the art at the time of the invention that the quantity of these compounds would ultimately affect the conductivity as well as the transparency of the resulting dry film. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the amounts of inert nanoparticles and from and ITO in the dry film through process optimization, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See In re Boesch, 205 USPQ 215 (CCPA 1980).

IV. Regarding claim 35, Hino teaches all the limitations of claim 1, as well as warning of potential problems with transparency due to the incorporation of the nanoparticles, based upon their size (0042). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the size and amount of the nanoparticles such that the transparency of the molding without the particles is substantially the same as the transparency of the moulding with the nanoparticles. One would have been motivated to make this modification as Hino teaches at several locations the importance of maintaining the transparency of the moulding by optimizing the parameters of the lacquer system, as well as teaching that the hard coat can be utilized for displays (see Hino at 0042, 0039, 0055 and 0142).

V. Regarding claim 36, Hino teaches all the limitations of claim 1, and therefore the coating would also be expected to have a conductivity when using not more than 33% by weight of ITO and nanoparticles identical to a conductivity achieved with no nanoparticles and 50% by weight

of ITO, or one of ordinary skill in the art at the time of the invention could have optimized the coating through routine optimization such that this result was achieved. One would have been motivated to make this modification as the use of less electrically conductive particles would provide a better transparency of the film (see Hino at 0039).

4. Claims 11 and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hino in view of Yamaya et al. (U.S. PGPUB No. 2003/0087102).

I. Regarding claims 11, 37 and 38, Hino teaches all the limitations of claim 1, but fails to teach component (d) comprising a copolymer of methacrylates. However, Yamaya teaches the formation of a protective coat on a transparent plastic substrate (this is comparable to a hard coat, see abstract), wherein the protective coat can comprise copolymers of methyl methacrylate and butyl methacrylate (0082). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hino's method by utilizing the copolymers taught by Yamaya. One would have been motivated to make this modification as one of ordinary skill in the art at the time of the invention could have utilized a copolymer of methacrylates as taught by Yamaya with a reasonable expectation of success (as Yamaya is teaching the use of this copolymer for similar hard coats) and a predictable result.

II. Regarding claim 39, Hino in view of Yamaya teach all the limitations described above, but fail to teach the copolymer specifically comprising the proportions as claimed. However, it would have been obvious to one of ordinary skill in the art at the time of the invention that the

proportions of the monomer components would affect the hardness of the resulting coating film. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the proportions of the monomers through process optimization, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See In re Boesch, 205 USPQ 215 (CCPA 1980).

5. Claims 13-19, 21-26 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hino in view of Servaty et al. (U.S. PGPUB No. 2003/0124051).

I. Regarding claims 23, 26 and 40, Hino teaches all the limitations of claim 1, but fails to teach how the metal oxide particle is obtained or the specifics of the particles as defined by presently pending claim 26. However, Servaty teaches preparing indium tin oxide by converting a metal chloride into an oxide in a high-temperature flame (0008, 0009 and 0017). More specifically Servaty teaches that the indium tin oxide is prepared by mixing a solution of an indium salt (such as a chloride or nitrate) with a solution of a tin salt (0008 and 0009), atomizing the mixture, pyrolyzing the atomized solution, and separating the indium tin oxide from the exhaust gases (0008). Further, Servaty teaches these particles having identical properties to those of pending claim 26 (0005). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hino's method by utilizing Servaty's electrically conductive particles. One would have been motivated to make this modification as Servaty teaches that there procedure for preparing the particles allows for preparation of specialized

particles having a specific color and use (0022). Furthermore, one of ordinary skill in the art at the time of the invention could have substituted Servaty's particles for those of Hino's with a reasonable expectation of success (especially given that Servaty teaches that their particles are to be utilized in coating of plastic materials to produce transparent and electrically conductive coatings 0004 and 0020) and a predictable result.

II. Regarding claims 13-19, 21, 22, 24 and 25, Hino in view of Servaty teach all the elements described above, but fail to particularly disclose the degrees of aggregation or agglomeration or the sizes of these aggregates and agglomerates. However, given that Servaty teaches the identical process for producing the electrically conductive particles (see above, as well as the present specification at pages 15-17), it is believed that the particles inherently have the characteristics as claimed in claims 13-19, 21, 22, 24 and 25. Regardless, it would have been obvious to one of ordinary skill in the art at the time of the invention that the sizes of the aggregates and agglomerates, as well as the nature of these aggregates and agglomerates, and the volume content of these aggregates of these primary particles would ultimately affect the antistatic properties of the hard coat as well as the transparency of the hard coat. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to optimize these parameters through process optimization, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See In re Boesch, 205 USPQ 215 (CCPA 1980).

6. Claims 13-19, 21-26 and 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hino in view of Hasskerl et al. (WO 03/000808, referencing U.S. PGPUB No. 2004/0213989 as its English equivalent).

I. Regarding claims 13, 14, 17, 18, 22, 23, 26, 40 and 41, Hino teaches all the limitations of claim 1, but fails to teach the specifics of the metal oxide particles. However, Hasskerl teaches a similar method of coating plastics with a lacquer system comprising electrically conductive metal oxide particles (0019-0024). Further, Hasskerl teaches the metal oxide particles being in an undispersed condition comprising agglomerates up to 2000 or 1000 nm (0058). Hasskerl teaches that these particles are indium tin oxide powder which has from 10 to 80% by volume content of agglomerated particles with a particle size of from 50-120 nm (0061). Hasskerl teaches these particles having the characteristics as are presently claimed in claim 26 (0079) and are prepared by converting a metal chloride into a metal oxide in a high temperature flame (0062). Finally, Hasskerl teaches that these particles are more specifically obtained by mixing a solution of an indium salt with a solution of a tin salt to obtain a solution mixture, atomizing the mixture, pyrolyzing the mixture to thereby obtain exhaust gases and isolating indium tin oxide from the exhaust gases where said indium salt is a chloride, nitrate, or acetates (0067-0068). It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute Hasskerl's metal oxide particles and method for preparing them for Hino's generic metal oxide particles. One would have been motivated to make this modification as Hasskerl teaches that the use of agglomerated particles is beneficial by leading to an improvement in the electrical conductivity of the cured composition (0064).

II. Regarding claims 15, 16, 19, 21, 24, 25 and 42, Hino in view of Hasskerl teach all the limitations described above, but fail to teach the additional limitations on the aggregation and other parameters as is presently presented in pending claims 15, 16, 19, 21, 24, 25 and 42. However, given that Hasskerl teaches the identical process for producing the electrically conductive particles (see above, as well as the present specification at pages 15-17), it is believed that the particles inherently have an aggregate size up to 200 nm, wherein the aggregates comprise secondary particles combined by way of sinter bridges, and agglomerates which are held together by Van der Waals forces and comprise from 25-90% agglomerated in a chain-like series which has branching or takes the from of three-dimensional structure of series of particles. Alternatively, given Hasskerl's teaching of the importance of the agglomeration of the metal oxide particles (0064), it would have been obvious to one of ordinary skill in the art at the time of the invention to choose the instantly claimed ranges of aggregation as well as the structures through process optimization, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See In re Boesch, 205 USPQ 215 (CCPA 1980).

7. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hino in view of Liu et al. (U.S. PGPUB No. 2002/0114934).

Regarding claim 29, Hino teaches all the limitations of claim 1, but fails to explicitly teach the inert nanoparticles being an organosol or silica sol. However, Liu teaches a

composition to be utilized as a hard coat comprising inorganic oxide particles dispersed in a binder (0052) and that silica is the preferred inorganic particle and is generally provided in the form of a sol (0053). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hino's method by incorporating the silica nanoparticles into the composition as a silica sol, as is disclosed by Liu. One would have been motivated to make this modification as one of ordinary skill in the art at the time of the invention could have substituted a silica sol for Hino's generic teaching of silica particles with a reasonable expectation of success (as Liu teaches that silica sols are a preferred means of incorporating inorganic oxide particles into a hard coat) and a predictable result of providing a method for producing mouldings using a composition comprising a silica sol as one element.

8. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hino in view of Anand et al. (WO 95/10564).

Regarding claim 32, Hino teaches all the limitations of claim 1, but fails to teach the inert nanoparticles being fine-particle destructured fumed silicas. However, Anand teaches the use of fine-particle destructured fumed silicas in compositions (abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hino's method by utilizing destructured fumed silica in place of the generic silica taught by Hino. One would have been motivated to make this modification as Hino teaches that transparency of the lacquer is important (0038) and Anand actually teaches that their destructured fumed silica is beneficial as a clarifying agent in certain thermoplastic compositions (page 4, lines 6-11). Furthermore, one

of ordinary skill in the art at the time of the invention could have made this substitution with a reasonable expectation of success (as it would still provide the necessary properties that the usual silica particles would impart) and a predictable result.

Conclusion

Claims 1-27 and 29-42 are pending.

Claims 1-27 and 29-42 are rejected.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT S. WALTERS JR whose telephone number is (571)270-5351. The examiner can normally be reached on Monday-Friday, 8:00am to 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571)272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ROBERT S. WALTERS JR/
July 13, 2009
Examiner, Art Unit 1792
/Michael Kornakov/
Supervisory Patent Examiner, Art Unit 1792